Packet Tracer - WAN Concepts

Objectives

In this activity, you will investigate various types of WANs by exploring a topology that uses diverse connectivity technologies.

- Describe different WAN connectivity options.

Background / Scenario

You will explore WAN technologies that are used to connect business and home users to data services.

Note: There is no scoring in this activity.

Instructions

Part 1: Investigate Consumer WAN Technologies for Home and Mobile Devices.

Step 1: Explore Consumer WAN Technologies.

In this step, you will explore three consumer WAN technologies and home networks.

a. Look at the two home networks.

What are the WAN technologies in use?

b. Examine the connections used in the network topology by selecting the Connections icon (the orange lightning bolt) in the PT devices menu. Hover over the media icons to display their names in the white box at the bottom of the PT window.

What media is used to connect the two home networks to the ISP? What devices in the home networks are directly connected to the ISP?

c. Click the DSL modem and open the Physical tab.

What ports are available on the device and what is connected to them?

What is the purpose of the DSL modem?

What is the type of connection between the ISP/Telco/Cable Company network and the Home Cable Network? Why is the splitter necessary?

d. Look at the ports on the cable modem.

What does the cable modem do? What connections does it have?

Which port does the cable from the cable modem connect to on the home wireless router? Where did the interface IP address come from?

e. Look at the Smartphone.

What is its IP address? Where did the IP address come from?

What data service is the cellphone currently using (cellular data or Wi-Fi)?

Step 2: Explore the Business WAN

In this step you will explore the business WAN. The business is a retail tire store. It has a local headquarters where most of the business functions occur, and three stores that are connected to the business WAN.

a. Look at the Connections menu.

What different types of connections do you see in use in the Business network?

b. Open the physical view for the StoreNet switch.

What types of interfaces are present? You may need to zoom and scroll the view to see.

Which interfaces and media are used to connect the store networks to the Business Headquarters network? Why was this done?

What type of WAN service is used to connect the Business Headquarters router to the ISP?

Part 2: Explore Connectivity

Ping devices within the Business WAN and the Consumer WAN networks. Also ping between the networks and the between the networks and the web server. Can all hosts ping each other and the web server?

Is this a good situation?